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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/648,971

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Terry Lee Erskine

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EXAMINER

VU, PHUONG T

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,971

Applicant(s)

ERSKINE, TERRY LEE

Examiner

Phuong T. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 5 is objected to as the recitation of at least a subset of the side walls and that the first sides and the second sides are flip sides of the side walls in the subset is unclear. The claim is rejected below using an interpretation which is best understood by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 4, 8, 10-13, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang (US 5,808,867). Regarding claim 1, the reference discloses a modular electronic system using a tongue and groove arrangement to restrain motion of electronic modules 20, the modular electronic system comprising an equipment rack (comprising computer chassis not shown and 10, 10') with a plurality of openings (see figure 4) for receiving electronic modules, wherein an opening is defined by a left side wall, a right side wall, and a bottom surface (bottom of computer chassis), where the left side wall has a first side (10 provided with 120 on left side wall) and a second side

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(10' provided with 120' on left sidewall) and further defines a first groove (bottom groove directly below 120 on left side wall) on the first side of the left wall disposed a first height above the bottom surface and a second groove (top groove directly above 120 on left side wall) on the second side of the left side wall at a second height above the bottom, the second height different than the first height, where the right side wall further defines a third groove (top groove above 120 on right side wall) disposed the second height above the bottom surface and a plurality of electronic modules 20 with housings adapted to slidably couple into openings of the equipment rack, where a housing for an electronic module further comprises at least a left side wall and a right side wall, where the left side wall of the electronic module comprises a first tongue 23 that is adapted to slidably mate with the first groove in a corresponding left side wall of the equipment rack, and where the right sidewall of the electronic module comprises a second tongue 23 that is adapted to slidably mate with the third groove in a corresponding right side wall of the equipment rack.

Regarding claim 2, the opening in the equipment rack that is defined by the left side wall, the right side wall, and the bottom surface does not have an upper surface for restraining vertical movement of an electronic module.

Regarding claim 4, at least one of the electronic modules corresponds to a power supply.

Regarding claim 8, the reference discloses a sidewall in an equipment rack that is adapted to hold electronic modules, the side wall comprising a first side, a second side, a first groove (top groove above 120 on right side wall) defined in the first side,

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and a second groove (bottom groove below 120 on left side wall) defined in the second side, wherein the second groove is at a different height than the first groove.

Regarding claim 10, the first groove on the first side is adapted to mate with a first tongue 23 on a first side of an electronic module, and where the second groove on the second side is adapted to mate with a second tongue 23 on the second side of another electronic module, where the second side is opposite to the first side.

Regarding claim 11, the reference discloses a housing for an electronic module 20 that is adapted to slide into an opening in an equipment rack, the housing comprising a rear side adapted to interface with the equipment rack via at least one connector 22, a front side, a top, a bottom, a first side wall 232 with a first tongue 23, where the first tongue is at a first height with reference to the bottom, where the first tongue extends outward from the first side wall, where the first tongue is adapted to slidably couple into a first groove (bottom groove on left side wall) of a corresponding wall of an equipment rack, and a second side wall opposite the first side wall, the second side wall having a second tongue 23 that is adapted to slidably couple into a second groove (top groove on right hand side wall) of a corresponding wall of the equipment rack, where the second tongue extends outward from the second side wall, where the second tongue is at a second height with reference to the bottom, where the second height is different from the first height.

Regarding claim 12, the electronic module corresponds to a power supply.

Regarding claim 13, the at least one connector comprises a plurality of connectors.

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Regarding claim 15, a power supply embodies the housing.

4. Claims 1-3, 5-10 rejected under 35 U.S.C. 102(b) as being anticipated by Chen (US 6,388,875B1). Regarding claim 1, the reference discloses a modular electronic system using a tongue and groove arrangement to restrain motion of electronic modules 90, 90" the modular electronic system comprising an equipment rack comprising 102, 102" with a plurality of openings for receiving electronic modules, wherein an opening is defined by a left side wall, a right side wall, and a bottom surface, where the left side wall has a first side and a second side and further defines a first groove (bottom-most groove in left side wall) on the first side of the left side wall disposed a first height above the bottom surface and a second groove (groove above the first groove in the left side wall) on the second side of the left side wall at a second height above the bottom, the second height different than the first height, where the right side wall further defines a third groove (groove above bottom-most groove in right side wall) disposed the second height above the bottom surface, and a plurality of electronic modules with housings adapted to slidably couple into openings of the equipment rack, where a housing for an electronic module further comprises at least a left side wall and a right side wall, where the left side wall of the electronic module comprises a first tongue 110 that is adapted to slidably mate with the first groove in a corresponding left side wall of the equipment rack, and where the right sidewall of the electronic module comprises a second tongue 110 that is adapted to slidably mate with the third groove in a corresponding right side wall of the equipment rack.

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Regarding claim 2, the opening in the equipment rack that is defined by the left side wall, the right side wall, and the bottom surface does not have an upper surface for restraining vertical movement of an electronic module.

Regarding claim 3, a first side of a single side wall defines the left side wall with the first groove for the opening, and a second side of the single side wall defines a right side wall with a second groove for the second opening.

Regarding claim 5, the reference discloses an equipment rack comprising 102, 102" for holding electronic modules 90, 90" the equipment rack for holding electronic modules, the equipment rack comprising a plurality of bottom walls, a plurality of side walls, where a space between sidewalls and a bottom wall defines an opening for an electronic module, where at least a subset of the sidewalls (each sidewall defining a subset) have first and second sides, where the first sides and the second sides are flip sides of the side walls in the subset, a plurality of first grooves (bottom-most groove in left side wall) on the a first sides of the side walls of the subset, where the first grooves are displaced by a first amount from a bottom wall of a corresponding opening, and a plurality of second grooves (above bottom-most groove in right side wall) on the second sides of the side walls of the subset, where the second grooves are displaced by a second amount from a bottom wall of a corresponding opening, where the second amount is different from the first amount.

Regarding claim 6, the opening in the equipment rack that is defined in the space between a first side of a side wall, a second side of the sidewall, and a bottom

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surface does not have an upper surface for restraining vertical movement of an electronic module disposed therein.

Regarding claim 7, the first side of the side wall and the second side of the side wall comprise opposite sides of a single wall.

Regarding claim 8, the reference discloses a sidewall in an equipment rack that is adapted to hold electronic modules, the side wall comprising a first side, a second side, a first groove defined in the first side (bottom-most groove in left side wall), and a second groove (above bottom-most groove in right side wall) defined in the second side, wherein the second groove is at a different height than the first groove.

Regarding claim 9, the sidewall is fabricated from a single sheet of metal.

Regarding claim 10, the first groove on the first side is adapted to mate with a first tongue 110 on a first side of an electronic module, and where the second groove on the second side is adapted to mate with a second tongue 110 on the second side of another electronic module, where the second side is opposite to the first side.

Response to Arguments

5. Applicant's arguments filed September 14, 2004 have been fully considered.

Regarding claim 1, Applicant states that the rejection based on Wang does not meet the claimed limitations set forth and that Wang does not teach a side wall with grooves on both sides of the side wall. The above rejection of claim 1 shows that the Wang reference reads upon the claim limitations. It is shown in figure 4 of the reference that Wang teaches providing a side wall with grooves on both sides of the wall. The grooves are identified in the above rejection. These grooves are provided on a side wall and

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extend the length of the wall and are provided directly above and below component 120. Therefore it may be seen that a side wall has grooves on both sides of the side wall at the bottom side and at the top side. Regarding claim 11, Applicant submits that Wang does not disclose that the first tongue and the second tongue extend outward from the first side wall and the second sidewall as required by claim 1. Referring to figure 2, it is shown that the tongues 23 extend above the side surface 232 of the power supply 20. Therefore, it may be considered that the tongues extend outward from the first side wall and the second sidewall.

Regarding claim 1, Applicant states that Chen does not disclose the amended limitation of the claim. However, as noted in the above rejection, this limitation has been fully met by the reference. Applicant submits that Chen does not teach a side wall with grooves on both sides of the side wall. As shown in the figures, there are grooves in the lower side of the wall and on the upper side of the wall, in addition to the middle areas of the wall. Furthermore, there are grooves in the lower side of the wall, on the upper side of the wall, and in the middle areas of the wall on the opposite side of the wall. Regarding claim 5, it is stated that Chen does not teach side walls where the first sides and second sides are flip sides. It is somewhat unclear what Applicant means as a "flip side". It is believed that the first and second sides each provide a groove and may therefore be considered to meet this claim limitation.

Regarding claim 8, it is stated that in both the rejections based on Wang and Chen, the first side and second side are from the same sidewall. The present rejection fully addresses this claim limitations.

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Furthermore, it is believed that the present rejection addresses the limitations of all the claims set forth.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong T. Vu whose telephone number is (571) 272-2111. The examiner can normally be reached on Mon. & Tues., 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S. Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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